

AMENDMENT TO THE CLAIMS

Please amend the presently pending claims as follows:

1. Cancel.

2. Cancel.

3.(New) Apparatus for transmitting information by means of radiated electromagnetic fields in free space for reception of the information by a receiver at a remote location, the apparatus comprising an antenna in the form of a super-toroidal conductor having a conductor length  $\ell$ , an electrical signal generator controllable to produce electrical signals having at least one frequency component which is not less than  $2c/\ell$  where  $c$  is the speed of light in free space, a modulator to modulate said electric signals in accordance with the information to be transmitted, a coupler to couple said modulated electrical signals from said generator to energize said antenna at the frequency of said component which is substantially above frequencies at which the current in all segments of the super-toroidal conductor can be in phase, whereby electromagnetic fields are launched by the antenna to transmit the information.

4.(New) Apparatus for receiving information transmitted by means of radiated electromagnetic fields in free space from a distant transmitter, the apparatus comprising an antenna in the form of a super-torodial conductor having a conductor length  $\ell$ , a receiver arranged to receive electrical signals having at least one frequency component which is not less than  $2c/\ell$  where  $c$  is the speed of light in free space, a coupler to couple , from the antenna to the receiver, electrical signals produced in the antenna due to interaction with electromagnetic fields having said frequency component and carrying the transmitted information

wherein the frequency of said component is substantially above frequencies at which the current in all segments of the super-toroidal conductor can be in phase, and a detector for detecting the information from the received electrical signals.